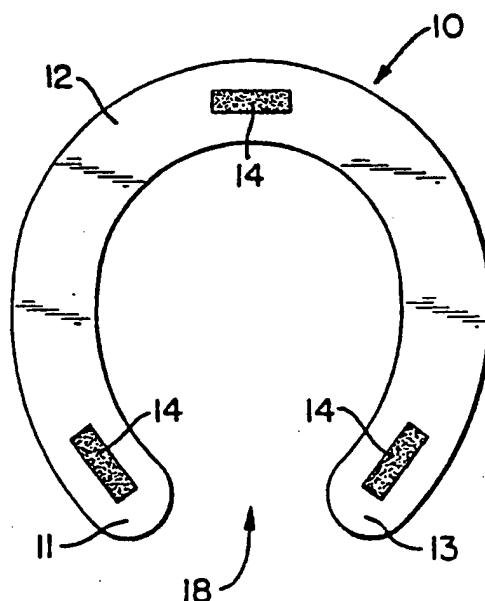




## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<b>(21) International Application Number:</b> PCT/US87/02343 <b>(22) International Filing Date:</b> 15 September 1987 (15.09.87)  <b>(31) Priority Application Number:</b> 908,182 <b>(32) Priority Date:</b> 17 September 1986 (17.09.86) <b>(33) Priority Country:</b> US  <b>(71)(72) Applicants and Inventors:</b> FROMSON, Antoinette, D. [US/US]; FROMSON, Howard, A. [US/US]; 15 Rogues Ridge Road, Weston, CT 06880 (US).  <b>(74) Agent:</b> HEMINGWAY, Alfred, H., Jr.; Felfe & Lynch, 805 Third Avenue, New York, NY 10022 (US).		<b>(81) Designated States:</b> AT (European patent), BE (European patent), CH (European patent), DE (European patent), FR (European patent), GB (European patent), IT (European patent), JP, LU (European patent), NL (European patent), SE (European patent).  <b>Published</b> <i>With international search report.</i>

**(54) Title:** SANITARY TOILET SEAT COVER**(57) Abstract**

A disposable sanitary toilet seat cover (10) that may be releasably adhered to a toilet seat. The cover (10) comprises a substantially two-dimensional annular blank (12) in the approximate shape of a toilet seat and temporary fastening means (14) integral with the side of the blank that contacts the toilet seat. The fastening means are therefore firmly attached to the blank but releasably attach to the toilet seat.

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SANITARY TOILET SEAT COVER

This invention relates to toilet seat covers, more particularly to disposable sanitary covers for toilet seats. As real or imagined fears of contracting such illnesses as incurable venereal disease, herpes and acquired immune deficiency syndrome and the like are generated by the "discovery" of or notoriety achieved by new health problems, people are becoming more cautious in areas of personal hygiene.

Public and semi-public restrooms are often equipped with dispensers of sanitary covers for the toilet seats. These covers are usually constructed of a light weight paper and present some problems in their use, such as their tendencies to be difficult to place in position, to not stay in one place and to sometimes stick to the skin of the user. The shortcomings of the state of the art commercial disposable covers have led to various attempts to provide users of non-private restrooms with improved sanitary devices.

Bass, in United States Patent No. 4,525,880, describes a portable, foldable toilet seat comprising a toilet seat-shaped shell filled with a stack of liners, wherein the liners contact the toilet seat. The individual liners may be attached to one another by glue on the edges of same. Drawbacks to the Bass invention, and to the other prior art inventions described in the Bass patent (i.e., United States Patents Nos. 310,401; 396,803; 1,156,629; 1,633,222; 2,443,068; 2,742,650; and 3,261,030), include the facts that they appear to be relatively bulky and yet must be carried around on the user's person. They appear to

not lend themselves to being made available to users in restrooms because use by a number of people would defeat the purpose of the devices and also because the devices would easily be subject to the common restroom problems of theft and destruction.

Shoji, in United States Patent No. 4,359,787, discloses a toilet seat-shaped backboard, which may be adhered to the toilet seat and which has a stack of cover sheets attached to it through the use of nipping members or paste on the sides of the stack. As disclosed, each cover in the stack must be of a different size than the next adjacent cover. The Shoji device appears to be subject to the same difficulties and limitations on practical use as the Bass device.

Aoyama, in United States Patent No. 3,851,341, illustrates a foldable toilet seat cover that incorporates an inner central portion detachably secured at one end to the inner edge of the toilet seat-shaped annulus and an adhesive-bearing patch secured to the upper surface of the front portion of the cover. While apparently free of the problems inherent in the prior art previously noted, the Aoyama cover does comprise fundamentally unnecessary material (such as the inner central portion) and would appear to be awkward to use with a toilet seat having a split or divided front, as many restroom seats do.

Nagel, in United States Patent No. 3,558,921, discloses a combination toilet seat cover and stool specimen collector. The collector portion is detachable from the seat cover portion, which comprises pressure sensitive adhesive at both sides and the front of the cover for temporarily adhering the cover to the seat. The adhesive spots may be covered by a

non-adhering material which is stripped off prior to use of the device.

Leslie, in United States Patent No. 2,200,394, describes a combination sanitary cover and seal for a toilet seat which is destroyed when the cover and seal is removed from the seat. The article is for use in hotels and the like as assurance to the guests that sanitary measures for their protection have been taken subsequent to the departure of the prior occupants of the room. The entire seat, including the central opening, is covered by the device, and gummed flaps are used to secure the cover over the seat.

An object of the present invention is to provide a simple yet workable sanitary cover for a toilet seat.

Another object of the invention is to provide a form of sanitary cover for a toilet seat that may be either provided in a restroom in dispenser-type form or be conveniently folded and retailed in packages of one or more for the convenience of users of public accommodations.

Still another object of the invention is to provide a cover of one size and shape which will fit a variety of toilet seats.

Still another object of the invention is to provide a cover that may be removed in a sanitary manner.

Our invention overcomes problems inherent in prior art solutions and meets the above objects by providing an essentially two-dimensional, annular blank

in the approximate shape of a toilet seat and having means for temporarily adhering the blank to the seat. A sanitary cover according to the invention comprises a minimum of material, provides means for overcoming the problems of prior art covers, and permits packaging in either laminate form or as folded, individual covers in containers of one or more. In one embodiment, the cover will accommodate a range of toilet seat shapes and sizes because of a split front and the use of fastening means that serve to temporarily secure the cover within a range of positions.

FIG. 1 is the underside of one embodiment of a sanitary cover according to the invention;

FIG. 2 is a view of the top of the FIG. 1 embodiment, wherein the sides of a split seat cover have been folded to accommodate a seat;

FIG. 3 is the underside of another embodiment of a sanitary cover according to the invention;

FIG. 4 is the underside of still another cover embodiment, wherein the attachment means are unsymmetrically disposed on the cover and tab means are provided for permitting removal of the cover from the toilet seat;

FIG. 5 illustrates yet another embodiment, which includes tabs for use in easily unfolding a packaged cover and in removing a cover from a seat;

Fig. 6 shows the underside of another split seat cover embodiment; and

Fig 7. illustrates an embodiment having a plurality of adhesive patches and two tabs.

One preferred embodiment of a sanitary toilet seat cover according to the invention is shown in Fig. 1. The cover 10 comprises a substantially two-dimensional annular blank 12 of a suitable material such as paper, synthetic film, or the like. A gap 18 is provided between forward ends 11 and 13 of the cover. Fastening means for temporarily adhering the cover consist of adhesive patches 14 located at the center rear and forward sides of the cover. The adhesive patches serve to maintain the cover's position on the seat. As shown in Fig. 2, the adhesive patches 14 may be utilized in conjunction with folds, such as the exemplary folds 15 and 16 shown, to vary the shape of the cover to fit seats of different shape. In the cover embodiment 20 shown in Fig. 3, a continuous band of adhesive 22 extends almost the entire length of blank 24.

Preferred adhesives for use with the invention include adhesives that are relatively easily releasable from the surface of materials used in manufacturing toilet seats. Low shear tacky adhesives, such as used in making "stick-up" memo pads, and pressure sensitive adhesives, such as used in cellophane tape and the like are most preferred.

Fig. 4 illustrates the underside of an embodiment of the invention wherein a cover 30 has three adhesive patches 34 unsymmetrically located on the cover. So locating the adhesive permits the folding of individual covers for packaging while preventing adhesive-to-adhesive contacting by way of a fold either splitting a patch or bringing two patches

into contact with each other. As shown in the Fig. 4 example, the cover may be readily folded at dotted fold line 36 without resulting in any adhesive-to-adhesive contacts from patches 34. Projecting flap 38 provides a means for more readily separating cover 30 from the toilet seat and for removing the cover in a more sanitary fashion. Judicious location of the adhesive patches with regard to any desired folding pattern will prevent the patches from contacting each other.

Sanitary covers according to the invention may be conveniently packaged in laminated form, such that the pressure sensitive adhesive utilized to temporarily attach the cover to the seat serves also to temporarily adhere stacked covers to each other. Packaging the covers as a laminate would facilitate the handling and dispensing of the covers, since the laminate could be mounted in any orientation, including the vertical, without giving rise to dispensing problems.

Depending upon the characteristics of the material used to make a cover according to the invention, it be necessary and/or desirable to provide means for gripping the cover to allow for easy unfolding of packaged covers and to permit easy separation as between laminated covers and between used covers and the toilet seat. The embodiment shown in Fig. 5 comprises a cover 40 having unsymmetrical adhesive patches 42 and, adjacent each patch, a protuberance, flap or tab 46. The flaps 46 are preferably sized to allow convenient gripping between thumb and index finger.

If the cover is fashioned of a material subject to tearing, tabs or flaps may be used to



strengthen the area around each adhesive patch. They may also provide a means for independently separating each adhesive patch of the cover from either the top side of another cover to which it is laminated or from the toilet seat. Even in applications where tearing of the cover may not be a consideration, such flaps may be incorporated to serve as "handles" for easy unfolding or de-laminating, or as means permitting more sanitary removal of the cover from the toilet seat. The latter consideration addresses the likelihood that not all users of sanitary covers would be considerate enough to remove same from the seat after use.

The Figure 6 embodiment of the invention shows the underside of a cover 50 having a gap 52 to accommodate a split toilet seat, three adhesive patches 56 located asymmetrically with respect to a centerline extending from front-to-rear of the cover, and tabs 54 adjacent each adhesive patch.

The cover 60 of Fig. 7 has a plurality of asymmetrically placed adhesive patches 64, a gap 66 and two tabs 62 for use in opening the cover if folded, placing the cover on the seat and subsequently removing the cover.

It should be apparent that the invention may be utilized in fashioning any number of embodiments by varying shapes, the type, number and location of the means for adhering the cover to a toilet seat, and the form, number and location of any tabs or flaps employed.

We claim:

1. A sanitary cover for a toilet seat, said cover comprising an essentially two-dimensional annular blank in the shape and size of a toilet seat, said blank having a gap at the front portion thereof and means integral with said blank for temporarily adhering said cover to said seat at the rear and side portions of said cover.
2. A sanitary cover according to claim 1, wherein said means comprises at least one member selected from the group consisting of a pressure sensitive adhesive and a low shear, tacky adhesive.
3. A sanitary cover according to claim 2 wherein said adhesive is located at the center rear and forward side portions of said blank.
4. A sanitary cover according to claim 1, wherein said means are disposed unsymmetrically with respect to a centerline running from front to rear of the cover.
5. A sanitary cover according to claim 1, wherein at least one flap projecting outwardly from the outer annular circumference provides a means for gripping said cover.
6. A sanitary cover for a toilet seat, said cover comprising an essentially two-dimensional annular blank in the shape and size of a toilet seat, said blank having a gap at the front portion thereof and adhesive means integral with said blank for temporarily adhering said cover to said seat, said means comprising

discrete adhesive patches located at the rear and side portions of said cover.

7. A sanitary cover for a toilet seat, said cover comprising an essentially two-dimensional annular blank in the shape and size of a toilet seat, said blank having a gap at the front portion thereof, adhesive means integral with said blank for temporarily adhering said cover to said seat at the rear and side portions of said cover, and at least one flap projecting outwardly from the outer circumference of said annular blank, thereby providing a means for gripping said blank.

8. A sanitary cover for a toilet seat, said cover comprising an essentially two-dimensional annular blank in the shape and size of a toilet seat, said blank having a gap at the front portion thereof, adhesive means integral with said blank for temporarily adhering said cover to said seat, said means comprising discrete adhesive patches located at the rear and side portions of said cover, said patches being disposed at unsymmetrical locations with respect to a centerline running from front-to-back of said blank.

9. A sanitary cover for a toilet seat, said cover comprising an essentially two-dimensional annular blank in the shape and size of a toilet seat, said blank having a gap at the front portion thereof and means integral with said blank for temporarily adhering said cover to said seat, said means comprising a plurality of discrete adhesive patches.

10. A sanitary cover according to claim 9, wherein at least one flap projects outwardly from the outer

circumference of said annular blank to provide gripping means.

11. A sanitary cover according to claim 10, wherein there are a plurality of said flaps and each flap is adjacent an adhesive patch.

12. A sanitary cover for a toilet seat, said cover comprising an essentially two-dimensional annular blank in the shape and size of a toilet seat, a plurality of discrete adhesive patches integral with said blank for temporarily adhering said cover to said seat, and at least one flap projecting outwardly from the outer annular circumference of said annular blank to provide gripping means.

13. A sanitary cover according to claim 12, wherein there is a flap adjacent each adhesive patch.

14. A sanitary cover according to claim 12, wherein said blank has a gap at the front portion thereof.

15. A sanitary cover according to claim 12, wherein said adhesive patches are unsymmetrically disposed on said blank with respect to a front-to-rear centerline.

16. A sanitary cover according to claim 13, wherein said blank has a gap at the front portion thereof.

17. A sanitary cover according to claim 13, wherein said adhesive patches are unsymmetrically

disposed on said blank with respect to a front-to-rear centerline.

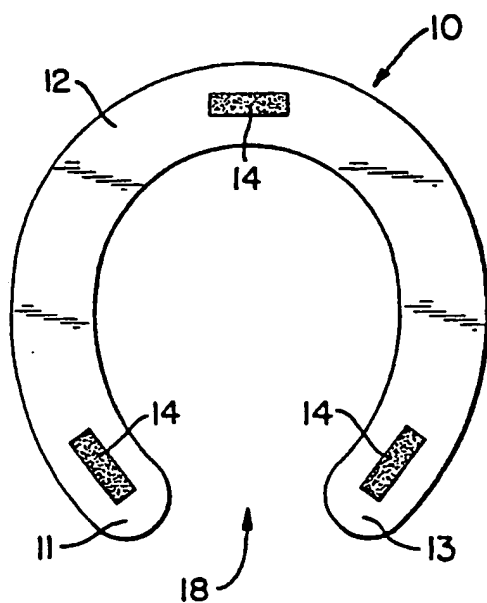


FIG. 1

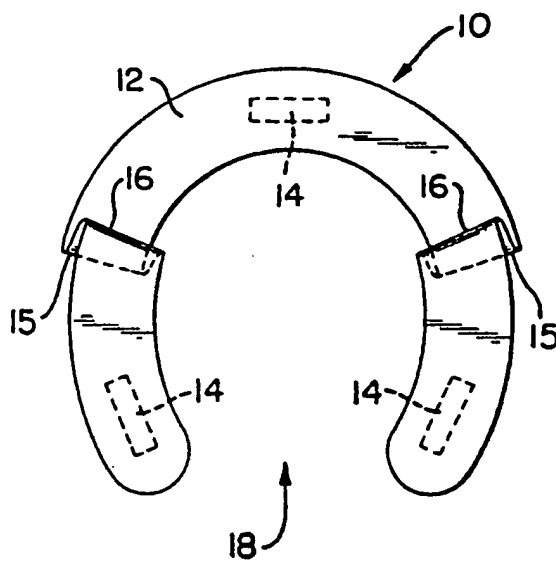


FIG. 2

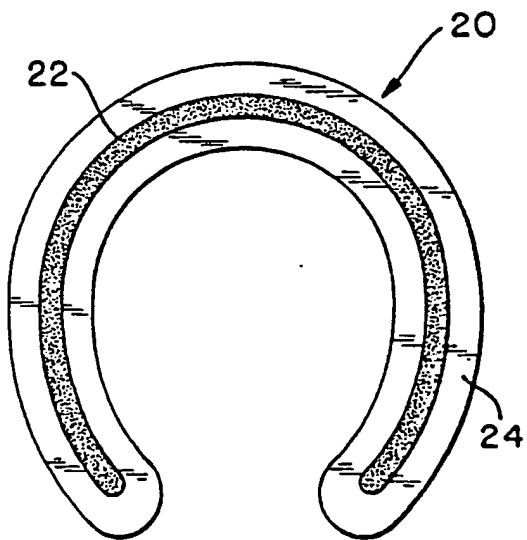


FIG. 3

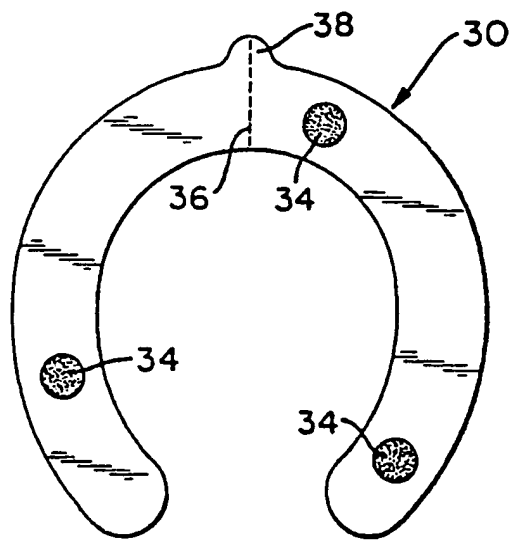


FIG. 4

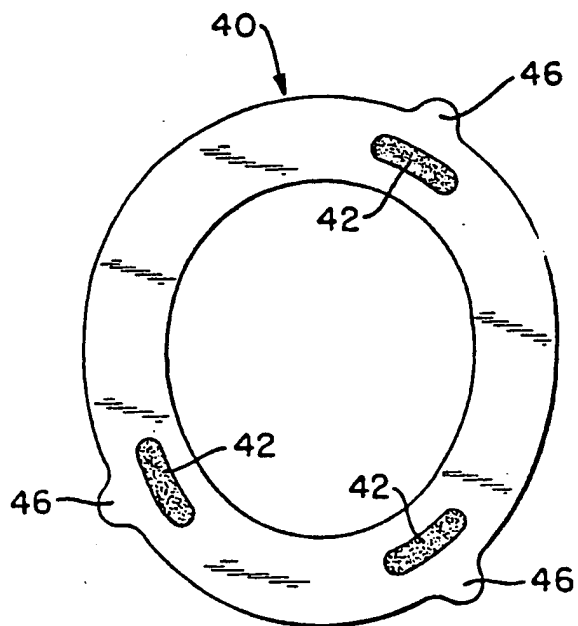


FIG. 5

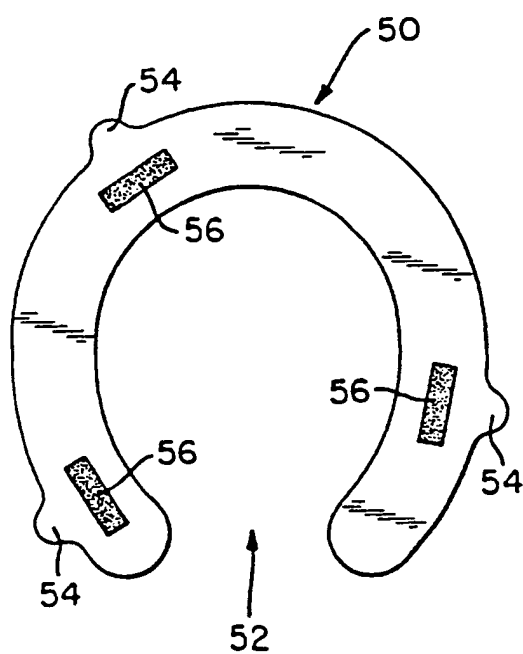


FIG. 6

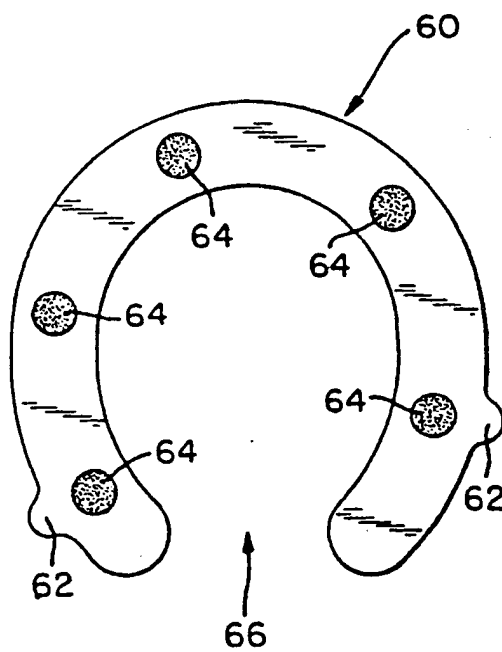
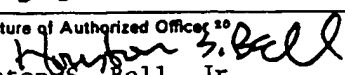


FIG. 7

# INTERNATIONAL SEARCH REPORT

International Application No **PCT/US87/02343**

<b>I. CLASSIFICATION OF SUBJECT MATTER</b> (if several classification symbols apply, indicate all) <sup>2</sup> According to International Patent Classification (IPC) or to both National Classification and IPC IPC (4): <b>A 47 K 13/14</b> U.S. CL: <b>4/243</b>		
<b>II. FIELDS SEARCHED</b> <div style="text-align: center; border-top: 1px solid black; border-bottom: 1px solid black; margin: 5px 0;">Minimum Documentation Searched <sup>4</sup></div> <div style="display: flex; justify-content: space-between; border-top: 1px solid black; border-bottom: 1px solid black; margin: 5px 0;"> <span>Classification System  </span> <span>Classification Symbols</span> </div> <div style="padding: 5px 0;">             U.S. <span style="margin-left: 100px;">4/242, 243, 244, 245, 247</span> </div> <div style="border-top: 1px solid black; padding: 5px 0; margin-top: 10px;">             Documentation Searched other than Minimum Documentation              to the Extent that such Documents are Included in the Fields Searched <sup>4</sup> </div>		
<b>III. DOCUMENTS CONSIDERED TO BE RELEVANT</b> <sup>14</sup>		
<b>Category <sup>8</sup></b>	<b>Citation of Document, <sup>16</sup> with indication, where appropriate, of the relevant passages <sup>17</sup></b>	<b>Relevant to Claim No. <sup>14</sup></b>
X	FR, A, 2421-588(David) 07 December 1979 See the entire document	1-17
X	DE, A, 3305-265 (Witt) 16 August 1984 See the entire document	1-17
Y	US, A, 4,359,787 (Shoji) 23 November 1982 See the entire document	1-17
Y	US, A, 1,761,391 (Harris) 3 June 1930 See the entire document	5-17
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><sup>15</sup> Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"A" document member of the same patent family</p> </div> </div>		
<b>IV. CERTIFICATION</b>		
<b>Date of the Actual Completion of the International Search <sup>1</sup></b>  <b>07 December 1987</b> International Searching Authority <sup>1</sup>  ISA/US		<b>Date of Mailing of this International Search Report <sup>3</sup></b>  <b>05 JAN 1988</b>  Signature of Authorized Officer <sup>20</sup>  Houston S. Bell, Jr.